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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/616,744	07/09/2003	Barry van Setten	13433US	2753
23719	7590	08/22/2006	EXAMINER	
KALOW & SPRINGUT LLP 488 MADISON AVENUE 19TH FLOOR NEW YORK, NY 10022			HANDAL, KAITY V	
			ART UNIT	PAPER NUMBER
			1764	

DATE MAILED: 08/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/616,744

Applicant(s)

VAN SETTEN ET AL.

Examiner

Kaity Handal

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) ____ is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1, 3-5 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Maaseidvaag et al. (US 6,167,696).

With respect to claims 1 and 18, Maaseidvaag teaches an apparatus comprised of a wall-flow filter (fig. 4, 22) comprised of: (a) inflow channels (44); (b) outflow channels (46), wherein said inflow channels (44) are connected to said outflow channels (46) through pores (as illustrated by arrows); and (c) exhaust treatment structures/walls (42), wherein said exhaust treatment structures/wall (42) are located in said inflow channels (44) and said outflow channels (46) thereby causing the exhaust gas to enter the wall-flow filter (22) through said inflow channels (44) and to leave the wall-flow filter (22) through the outflow channels, wherein said inflow channels (44) and said outflow channels (46) are linked by pores (col. 6, lines 18-20), thereby removing soot through the wall-flow filter (col. 6, lines 40-52).

With respect to claims 3-4, Maaseidvaag teaches wherein the wall-flow filter (22) and the exhaust treatment structures/walls (42) are made of a ceramic cordierite (col. 6, lines 14-17).

The device of claim 5, Maaseidvaag teaches wherein the exhaust treatment structures/walls (42) extend over the entire length or over partial areas of the inflow channels (44) and/or the outflow channels (46) (as illustrated).

3. Claims 1-3, 7-14 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Hirota et al. (US 6,367,246 B1).

With respect to claims 1, 7 and 18, Hirota teaches an apparatus comprised of a wall-flow filter (fig. 2, 18) comprised of: (a) inflow channels (61u); (b) outflow channels (61d), wherein said inflow channels (61u) are connected to said outflow channels (61d) through pores (as illustrated by arrows); and (c) exhaust treatment structures/walls (60), wherein said exhaust treatment structures/wall (60) are located in said inflow channels (61u) and said outflow channels (61d) thereby causing the exhaust gas to enter the wall-flow filter (18) through said inflow channels (61u) and to leave the wall-flow filter (18) through the outflow channels (61d), wherein said inflow channels (61u) and said outflow channels (61d) are linked by pores (col. 3, lines 53-60), thereby removing soot through the wall-flow filter (col. 3, lines 32-34).

With respect to claim 2, Hirota teaches wherein said inflow channels (61u), said outflow channels (61d), and said exhaust treatment structures/walls (60) are coated with a catalyst layer (63a and 62a).

With respect to claim 3, Hirota teaches wherein the wall-flow filter (18) and the exhaust treatment structures/walls (60) are made of a ceramic material (col. 3, lines 34-39).

With respect to claims 8-11 and 14, Hirota teaches wherein the catalyst layer/(NO_x adsorbent) comprises an oxidation catalyst (reducing the nitrogen oxides contained in the exhaust) (col. 4, lines 3-13) comprising an alumina carrier (col. 3, lines 61-67) (a base metal) to which platinum is applied (col. 3, lines 61-67).

With respect to claims 12-13, Hirota teaches wherein the catalyst layer comprises an SCR (V₂O₅, WO₃, or TiO₂)/transitional metals (col. 4, lines 13-14).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over by Maaseidvaag et al. (US 6,167,696), as applied to claim 5 above, and further in view of Hirota et al. (US 6,367,246 B1).

With respect to claim 6, Maaseidvaag discloses all claim limitations as set forth above but fails to show wherein both the outflow channels and the inflow channels have exhaust treatment structures and the exhaust treatment structures of said inflow channels and said outflow channels are coated with a catalyst layer but the catalyst layer on said exhaust treatment structure of said outflow channels comprises a different substance than the catalyst layer on said exhaust treatment structure of said inflow channels. Hirota teaches wherein the catalyst layer/NO_x

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adsorbent layer (62a) on said exhaust treatment structure/walls (60) of said outflow channels (61d) comprises a different substance than the catalyst layer/HC adsorbent (63a) (col. 4, lines 14-19) on said exhaust treatment structure (60) of said inflow channels (61u) (col. 3, lines 44-53) in order to store gas phase hydrocarbon in the inflowing exhaust gas (col. 4, lines 20-23) and to temporarily store the NO_x in the inflowing gas therein (col. 3, lines 44-53).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the exhaust treatment structure of the outflow channels comprise a different substance than the catalyst layer on said exhaust treatment structure of said inflow channels in Maaseidvaag, as taught by Hirota, in order to store gas phase hydrocarbon in the inflowing exhaust gas and to temporarily store the NO_x in the inflowing gas therein.

6. Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Hirota et al. (US 6,367,246 B1), as applied to claim 14 above, and further in view of Ohno et al. (US 2004/0033175 A1).

With respect to claims 15-16, Hirota discloses all claim limitations as set forth above but fails to show wherein the components for absorbing the nitrogen oxides comprise at least one alkaline-earth metal consisting of calcium. Ohno teaches a catalyst carrying filter comprising components for absorbing the nitrogen oxides comprise at least one alkaline-earth metal consisting of calcium in order to improve the durability of the catalyst (page 2, paragraph [0022]).

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to include components for absorbing the nitrogen oxides comprising at least one alkaline-earth metal consisting of calcium in Hirota's apparatus, as taught by Ohno, in order to improve the durability of the catalyst.

With respect to claim 17, Hirota teaches wherein the catalyst layer further comprises platinum on activated aluminum oxide (col. 3, lines 61-67).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kaity Handal whose telephone number is (571) 272-8520. The examiner can normally be reached on M-F 8-5.

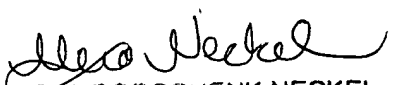
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KH

8/5/2006


ALEXA DOROSHENK NECKEL
PRIMARY EXAMINER